Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method for communicating data between a fiber optic data network and an electric power system, comprising:

receiving a first optical data signal comprising the data with via the fiber optic data network;

converting between the first optical data signal and a second data signal;

routing the data to one of a plurality of communication devices located in one of a plurality of customer premises;

transmitting the second data signal comprising the data with a transformer bypass device over a low voltage power line of the electric power system;

wherein the transformer bypass device is coupled to a medium voltage power line of the electric distribution power system and a low voltage power line of the electric power system and provides a path for data communications around a distribution transformer that converts the voltage of the medium voltage power line to low voltage; and

wherein said receiving, said converting, said routing, and said transmitting are performed by components co-located with the distribution transformer.

2. (Canceled)

3. (Previously presented) The method of claim 1, wherein the first data signal is compliant with the Synchronous Optical Network standard.

4. (Previously presented) The method of claim 1, wherein a radio frequency carrier signal is modulated with the data to provide the second data signal.

5. (Canceled)

6. (Previously presented) The method of claim 1, further comprising:

receiving second data via a low voltage power line from a communications device at one of the plurality of customer premises; and

transmitting the second data over the fiber optic data network.

7-13. (Canceled)

14. (Original) The method of claim 1, further comprising converting the second data signal to a third data signal, wherein the third data signal is capable of being transmitted on a telecommunications network.

15. (Previously presented) The method of claim 14, wherein a power line interface device converts the second data signal to the third data signal.

16. (Original) The method of claim 14, wherein the telecommunications network is a customer premise telephone network.

17. (Original) The method of claim 14, wherein the telecommunications network is a customer premise coaxial cable network.

18. (Previously presented) The method of claim 1, wherein the second data signal is received with a power line interface device located at a customer premises.

19. (Canceled)

20. (Previously presented) A device for converting data between a fiber optic data network and an electric power system that includes a distribution transformer, comprising:

a first interface port for communicating a first data signal with the fiber optic data network;

a second interface port for communicating a second data signal over a low-voltage power line of the electric power system;

a third interface port configured to communicate data signals over a medium voltage power line of the electric power system;

a fiber optic transceiver in communication with the first interface port;

a modem in communication with the fiber optic transceiver and the second interface port;

a router in communication with the fiber optic transceiver and the modem and configured to route data to one of a plurality of communication devices located in one of a plurality of customer premises; and

wherein said first interface port, said second interface port, said third interface port, said fiber optic transceiver, said modem, and said router are co-located with a distribution transformer.

21. (Previously presented) The device of claim 20, wherein the fiber optic transceiver converts a fiber optic data signal received at the first interface port to an electrical data signal.

22. (Previously presented) The device of claim 21, wherein the modem receives the electrical data signal and modulates a carrier signal with the electrical data

signal to form a first modulated data signal for communication to the electric power system.

23. (Previously presented) The device of claim 20, wherein the modem demodulates a modulated data signal received at the second interface port to produce a demodulated data signal for communication to the fiber optic transceiver.

24. (Previously presented) The device of claim 23, wherein the fiber optic transceiver converts the demodulated data signal to an optical signal for communication to the fiber optic data network.

25. (Canceled)

26. (Canceled)

27. (Previously presented) The device of claim 22, wherein the modem demodulates a second modulated data signal received at the second interface port to produce a demodulated data signal for communication to the fiber optic transceiver.

28. (Previously presented) The device of claim 27, wherein the fiber optic transceiver converts said demodulated data signal to an optical signal for communication to the fiber optic data network.

29. (Previously presented) The device of claim 20, wherein the low-voltage power line extends to a customer premise.

30-32. (Canceled)

33. (Previously presented) The device of claim 20, further comprising a conversion device to convert the second data signal to a third data signal, wherein the third data signal is capable of being transmitted on a telecommunications network.

34. (Original) The device of claim 33, wherein the telecommunications network is a customer premise telephone network.

35. (Original) The device of claim 33, wherein the telecommunications network is a customer premise coaxial cable network.

36. (Currently amended) A device for communicating data between a fiber optic data network that carries fiber optic data signals and an electric power system that carries ~~electrical data signals~~ electric power and includes a distribution transformer, comprising:

a fiber optic transceiver in communication with the fiber optic data network;

a router in communication with the fiber optic transceiver and configured to route data to one of a plurality of telecommunication network devices located in one of a plurality of customer premises;

a modem in communication with the router and a low-voltage power line of the electric power system; and

wherein said fiber optic transceiver, said modem, and said router are co-located with the distribution transformer.

37. (Previously presented) The device of claim 36, further comprising a power line interface device in communication with the electric power system and a telecommunication network device and located at one of the plurality of customer premises.

38. (Previously presented) The device of claim 37, further comprising a premise data network in communication with the power line interface device.

39. (Previously presented) The device of claim 37, wherein the power line interface device is communicatively coupled to a telephone.

40. (Canceled)

41. (Previously presented) The device of claim 36, wherein the fiber optic transceiver communicates with the fiber optic data network using the Synchronous Optical Network standard.

42. (Canceled)

43. (Previously presented) The device of claim 36, wherein the first modem is in communication with a network device.

44. (Previously presented) The device of claim 43, wherein the telecommunication network device includes at least one of the following: a telephone, a computer, a facsimile machine, a television, and a household appliance.

45. (Currently amended) The device of claim 36, further comprising ~~an~~ a medium voltage power line interface configured to communicate ~~of~~ over a medium voltage power line of the of the electric power system.

46. (Previously presented) The device of claim 45, wherein the medium voltage power line interface forms part of a power line bridge in communication and said

power line bridge forms a communication path for data to bypass the distribution transformer.

47-49. (Canceled)

50. (Previously presented) The device of claim 36, wherein low-voltage power line extends to a customer premise.

51-61. (Canceled)